

# Targeting Net Zero

**A strategic framework  
for business action**



## The University of Cambridge Institute for Sustainability Leadership

The University of Cambridge Institute for Sustainability Leadership (CISL) is a globally influential Institute developing leadership and solutions for a sustainable economy. We believe the economy can be ‘rewired’, through focused collaboration between business, government and finance institutions, to deliver positive outcomes for people and environment.

For over three decades we have built the leadership capacity and capabilities of individuals and organisations, and created industry-leading collaborations, to catalyse change and accelerate the path to a sustainable economy. Our practitioner orientated research builds the evidence base for action

## Rewiring the Economy

*Rewiring the Economy* is our ten-year plan to lay the foundations for a sustainable economy, built on ten interdependent tasks, delivered by business, government, and finance leaders co-operatively over the next decade.

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## CLARENCE HOUSE

It is now five years since an historic agreement was reached by governments in Paris to limit global warming to below 2°C by 2050 and to pursue efforts to limit warming to 1.5°C or lower.

When I addressed the delegates at that twenty-first conference of governments in 2015, I carried a warning that by damaging our climate we would become the architects of our own destruction. More positively, I also pointed out that we know exactly what needs to be done, and that we already have at our disposal the necessary knowledge, tools and money to put us on a low carbon path by 2030.

Today, there is a growing alignment around a net zero future. We can envisage a world where fossil-fuel powered economies give way to a new, decarbonised and circular economic system that prioritises a healthy planet and thriving communities.

However, our efforts to achieve this vision will now play out in an even more challenging context as we face seemingly competing pressures in the form of a global health crisis. Yet the coronavirus pandemic has deepened, rather than derailed, the climate debate and neither crisis can be seen in isolation.

If anything, the Covid-19 crisis has served as a powerful reminder of the vital, inseparable and interconnected relationships within human societies, as well as between humans and the natural world. Pressing social issues such as inequality and poverty have been exacerbated and laid stark by a public health and economic emergency. Yet the destruction of habitats through deforestation has been shown to increase pathogen transmission, by increasing human contact with animals providing opportunities for diseases such as Covid-19 to spread to humans. Global issues such as climate change and the depletion of Nature have the potential to amplify and further destabilise societies at a time when resilience is most valued.

Despite these challenging circumstances, governments, companies and public bodies are now bristling with net zero commitments. Notable examples range from the E.U.'s standard-raising Green Deal focused upon a fifty-five per cent emissions-reduction target by 2030 and China aiming for carbon neutrality before 2060, to pledges by the U.K.'s National Health Service and Ministry of Defence contributing to the efforts to become net zero by 2050. Around the world, major companies are pledging to become net zero well before 2050 and, earlier in 2020, the University of Cambridge itself committed to making its endowment fund net zero by 2038, following its earlier 1.5 degrees science-based target commitment.

A managed transition to net zero by 2050 at the latest is the safest and most credible way forward. It means everyone cutting their emissions as quickly and deeply as possible. The final goal has to be a global economy that is carbon neutral, as soon as possible. This transition – or, more aptly, this transformation – will require unprecedented co-operation and effort from all sectors of society, not least business, which must undergo its own transformation. This is something my Sustainable Markets Initiative is working to accelerate by putting Nature, people and planet at the heart of global value creation. This report and the efforts of the University of Cambridge Institute for Sustainability Leadership, of which I am proud to be Patron, are an important contribution in accelerating the progress we must now make over the decade to 2030.

# Executive Summary: Business Leadership for Net Zero

**A net zero emission economy will be essential to maintain a stable global climate. The private sector has a critical role in delivering this and there is a growing body of evidence to demonstrate that it makes good business sense to act.**

**Net zero**, commonly defined as the balance between the amount of greenhouse gas (GHG) produced and the amount removed from the atmosphere, is an essential requirement for a stable climate. This is the verdict of the Intergovernmental Panel on Climate Change (IPCC), the world's authority on climate science. To achieve this stability and head off the worst implications of climate change, GHG emissions must be cut quickly and deeply across all parts of the economy. The IPCC scenarios show that if we take swift and effective action, we can achieve a managed transition to net zero by 2050. This means the global economy will, collectively, need to be delivering no net CO<sub>2</sub> emissions within 30 years and reach no net GHG emissions shortly after. Importantly, any further delay to our action will exacerbate the scale of the challenge and reduce our window of opportunity for action, with significant risks to economies and societies.

**Achieving this will not be easy.** It will require companies in all sectors to act quickly and effectively to remove carbon emissions from their operations, their supply chains and from the use and disposal of their products and services. If we fail to decarbonise rapidly enough, we will need to undertake an even more challenging task of creating a 'net negative emission' economy, in which new technologies and nature-based solutions are deployed at scale to remove greenhouse gases from the atmosphere. The safest and most effective pathway to a stable climate is therefore through rapid decarbonisation.

**The ease and speed with which businesses can get to net zero will vary across countries and sectors.** Some organisations will be well positioned to remove carbon emissions quickly, while others will own assets with a payback period well beyond 2050.

**In many instances, businesses are realising that there are significant benefits to early action.** Action on climate change can inform innovation, mitigate risk, unlock better connections with stakeholders, and build brand and reputation. A growing number of businesses are realising that setting a course to net

zero can provide a powerful guiding light in turbulent times as well as delivering commercial benefits, as those leading the change are already experiencing.

**Yet, there is no blueprint for change.** This briefing and accompanying technical report, prepared by the University of Cambridge Institute for Sustainability Leadership (CISL), together seek to provide practical, strategic guidance for how organisations can overcome some of the challenges that are preventing action and how they can find ways to implement a net zero strategy.

**Drawing on our work with policymakers, financial organisations and businesses, coupled with interviews with senior decision-makers, we have identified four tasks to help businesses develop a strategic response to net zero.** This framework for business builds on CISL's *Rewiring the Economy* plan and sets out the core components that we believe are essential for any company looking to be fully aligned with net zero by 2050.

- Align organisational purpose, strategy and business models
- Set business goals and evidence-based targets, measure and report progress
- Embed net zero practices in operations and value chains
- Engage, collaborate and advocate for change across regions, sectors and markets

**Many of the companies that we work with at CISL are leading on this agenda, but very few businesses are making sufficiently rapid progress in all these four areas, and all businesses recognise there is still more to do.** We hope that this paper will help companies on this journey.



# Business in a Warmer World

## The impacts of a changing climate and the transformation of economies to reach net zero are changing the landscape of risk and opportunity for business.

**Climate change is already presenting clear risks for businesses.** One standard that is being adopted by financial institutions – and which will soon become mandatory for UK listed businesses – is the framework produced by the Task Force on Climate-related Financial Disclosures (TCFD).<sup>1</sup> It identifies three types of financial risk to business as a result of climate change:

- **Physical risk:** Understanding and anticipating climate change can help businesses mitigate physical risks and plan for the increased likelihood of extreme weather events, such as heatwaves, floods and wildfires, as well as longer-term climate phenomena, such as changes in seasonal rains, sea level rise and higher mean temperatures. One analysis estimates the annual cost of extreme weather events at \$195 billion, with projections of significant increases by 2040.<sup>2</sup>
- **Transition risk:** As national policymakers shift towards net zero, their decisions can have significant impacts on businesses that are behind the climate curve. Businesses most closely linked to the fossil-fuel economy are especially at risk. For example, the shift away from traditional internal combustion engines in cars or the shift towards renewable energy becoming the dominant technology in power generation will disrupt a number of sectors. Not all businesses will survive the change.
- **Liability risk:** Companies and their directors are likely to face greater legal liabilities if they fail to assess and disclose financial risks associated with climate change and their impacts on company performance. For example, in 2017, shareholders sued the Commonwealth Bank of Australia for failing to disclose climate change related risks in its annual report.<sup>3</sup> The case was settled after the bank agreed to improve disclosures in subsequent reports. In addition, there is an increase in public bodies, municipalities and non-governmental organisations (NGOs) bringing forward litigation that targets companies for contributing to climate change. For example, in 2018, the City of New York litigated in

an attempt to make the oil industry cover the cost of preparing the city for the impact of man-made climate change.<sup>4</sup>

**Climate change is also creating significant new opportunities for businesses.** This is particularly the case for those businesses that have ‘clean’ solutions to meet societies’ needs, or for those that can help communities to build their resilience to the physical impacts of climate change. For example, upgrading urban infrastructure and municipal services could make cities more climate resilient. This could unlock opportunities worth as much as \$24 trillion over the next three decades.<sup>5</sup>

**For some businesses, seizing these opportunities will require scaling existing activities, building strategic partnerships or finding routes to access new markets.** For others, it will require investment in breakthrough climate technologies, new mindsets, and the rewiring of their operations and supply chain. Achieving net zero will require change across all operations and may even require transformation of business models, such as a shift from selling to leasing assets.

**In some sectors the transformation is well underway.** The power sector, for instance, has undergone several radical shifts already. Innovations in renewable energy have made solar panels and wind turbines economically viable with relatively short set-up times. Investors and governments have been moving away from traditional sources of electricity, such as coal-fired power plants, in preference for greener options. Already the scale of this shift is meaning that companies focused on renewables are entering ‘oil supermajor’ territory with valuations in excess of £50–60 billion. For example, Ørsted and Iberdrola, both of which have a major focus on renewables, have overtaken lagging oil supermajors BP and Eni.

**The finance sector is moving quickly too.** Ever more aware of the risks and opportunities that climate change presents, bankers and investors are working to align their portfolios with the transition

to net zero. Many are also looking to provide new products and services in an effort to become 'go-to' providers of net zero solutions. With both public and private investment in climate action on an increasing trend, and exceeding half a trillion dollars in most recent years, the potential prize for early movers is considerable.<sup>6</sup>

**Other changes in the economy are also supporting business action.** Citizens, including vocal schoolchildren and an informed public, are increasingly expecting businesses to mitigate their environmental impact and equip them to live sustainable lifestyles. This is reflected in purchasing habits, with shoppers increasingly willing to vote with their pockets. Research by pollster Ipsos MORI, for instance, now places climate change as the "most important" environmental issue for consumers globally.<sup>7</sup> Within businesses, climate is proving a powerful contributor to employee retention and recruitment, especially among young workers.<sup>8</sup>

**Business leaders need to take account of the implications of policies related to climate change.** From setting out commitments for net zero, to implementing specific regulations designed to shift sectors like transport or power, there is a growing body of government action supporting the net zero transition.

**"For obvious reasons, it was important initially to raise awareness about the dangers of a 4°C planet. None of us want that. Now, however, I think the time is right to also start discussing the world we do want, not just the one we don't.**

**The problem is that many possible futures exist and none of us has a crystal ball. The business opportunities are very clear for some industries and less so for others. This uncertainty can be disconcerting for companies, of course. On the other hand, it is also very exciting because it means plenty of space exists for creativity, both from a societal point of view and a technological perspective.**

**I firmly believe that adopting a hopeful mindset centred on the opportunities presented by a net zero future will accelerate the shift we need to see – namely, from ambition to action. Hope, innovation and opportunity are some of the strongest drivers of change, both for society as a whole and for companies in particular."**

**Johanna Köb** Head of Responsible Investment,  
Zurich Insurance Group

# The Net Zero Imperative

**Today's socio-economic systems have been built in a period of stable climate, but the unintended consequences of our current emissions trajectory will change this.** At our current rate, scientists anticipate that by the end of the century the average global temperature could be up to 4°C or higher than pre-industrial levels. This would represent a temperature change at speeds unprecedented in geological history.<sup>9</sup>

**If humanity is to maintain this stable climate, it is imperative to change its emissions trajectory and avoid this level of 'runaway' climate change.** Given this reality, the question is not 'if' the economy will become net zero, rather it is 'when' action will be taken.

**Limiting temperature rise to 1.5°C will head off huge human, economic and environmental damage.** It will require transformation across the economy. Recent analysis by the UN Environment Programme anticipates that carbon dioxide emissions will need to be cut by 45 per cent by 2030 from 2018 levels and must reach net zero by 2050.<sup>2</sup>

**Internationally, there is a growing consensus that action needs to be taken.** In 2015, 196 governments agreed the Paris Agreement which aims to keep average temperature rise to well below 2°C above pre-industrial levels. More explicitly, the agreement, sets out to "pursue efforts to limit the temperature increase even further to 1.5°C". This goal has also been endorsed by a growing number of non-state actors. A case in point is the signatories to the 'Race to Zero' initiative, which, as of November 2020, includes nearly 500 cities, over 1,000 businesses and 45 of the biggest investors. Many of the businesses that are recognising this imperative are also setting science-based targets for their own emissions.<sup>10</sup> Other steps they are taking include working together in innovative partnerships, finding ways to engage customers and supply chains, and partnering with government in platforms such as CISE's Corporate Leaders Groups to inform the economic transition.

**"Either we succeed in coming together around the solutions to the different crises we now have and we move forward, or we ignore the facts, we ignore the reality, and we carry on constantly chasing our own tails."**

**Christiana Figueres** former Executive Secretary of UNFCCC and Co-Founder of Global Optimism

**"A net zero vision by 2050 in line with the Paris Agreement is the most viable way to collectively combat global warming. Ambitious long-term targets encourage investments and innovations that future proof our assets and attract customers."**

**Karl-Henrik Sundström** former CEO, Stora Enso



# The Transition to Net Zero

**The transition to net zero is critical for citizens, societies and businesses.** In order to maintain a safe and stable operating environment, decision-makers need to find innovations, business models and policies that deliver a different future.

**This transition will not be easy. The global lockdowns as a result of Covid-19** led to dramatically reduced aviation and road transport as well as significant downturns in industrial activity in a number of sectors. Collectively, these had a devastating impact on huge parts of the global economy. Even so, current predictions indicate that global carbon emissions for 2020 only reduced by around 7 per cent compared to 2019 levels. This means that even a dramatic economic upheaval at the scale of the Covid-19 response will still leave the world with more than 90 per cent of the necessary decarbonisation left to deliver if it is to get on track for net zero.<sup>11</sup>

**The scale of transformation will require a level of international collaboration that is rare in modern times,** and which will be challenging in the context of shifting geopolitics, economics and polarised societies (see box).

**“Conventional economic models cannot deal with the complexity of climate change and shifts in technology. They systematically overstate<sup>12</sup> the costs of decarbonisation and downplay the opportunities. Most models also downplay the importance of early public intervention to tilt the economy onto a new, more productive, path. This means that leadership matters. It also means that rather than predict the future, our efforts are better spent trying to manage and steer transition.<sup>13</sup>”**

**Dimitri Zenghelis,** CISL Senior Associate, CISL and course convenor for CISL's Towards Net Zero Emissions online course

## Navigating the transition in a Volatile, Uncertain, Complex and Ambiguous (VUCA) world

**Business and government leaders will need to navigate complex interdependencies between the net zero transition and wider economic and social risks, while also finding co-benefits for societies.** For example, in regions highly dependent on carbon-intensive industries the net zero transition could create large-scale disruptions to communities, industries and livelihoods. Meaningful progress and public buy-in may be difficult to achieve unless and until transition planning includes those who stand to lose. Other key factors include developing effective strategies to mitigate negative social impacts (e.g. through investing in reskilling workers and in new, sustainable enterprises), and ensuring a fair distribution of the benefits of transition.<sup>14</sup>

**In other areas, the transition to net zero can bring new opportunities and create new jobs.** Activities such as retrofitting and enhancing the energy efficiency of property, building resilient infrastructure and reshaping agriculture can support large-scale employment and grow vibrant communities.

**Transition strategies will also need to consider wider environmental impacts and imperatives.** Restoring natural systems that act as carbon sinks marks an essential pillar of any strategy. Economies will also need to find ways to achieve this restoration while ensuring they can safeguard their food and resource security. Wholesale changes will therefore be required to global food systems. A shift to a ‘circular’ approach to resource use is equally imperative.

**Yet, there are signals of hope.** Organisations such as the Energy Transitions Commission and the IPCC indicate that it is technically possible to deliver a net zero future<sup>15</sup>, while a 2020 update by the International Energy Agency found that wind, solar and bioenergy solutions are either on track to achieve their full potential in the energy mix or are lacking only policy or economic stimulus measures. The International Energy Agency's 2020 World Energy Outlook<sup>16</sup> identified

modern solar power as the cheapest electricity in history and found that ‘non-hydro renewables’ such as wind and solar are well on track to be the new dominant player in power generation. Continued focus will be needed on geothermal and ocean power technologies, which require policies to tackle pre-development risks and investment in large-scale demonstration projects.

**“CISL’s work with leading companies in all sectors makes it increasingly clear that there is a strong case for decisive and sustained action on climate change sooner rather than later. Alongside managing issues of risk and competitiveness, there are huge innovation opportunities to be unlocked”**

**James Cole** Director of Corporate Relations and Communications, CISL

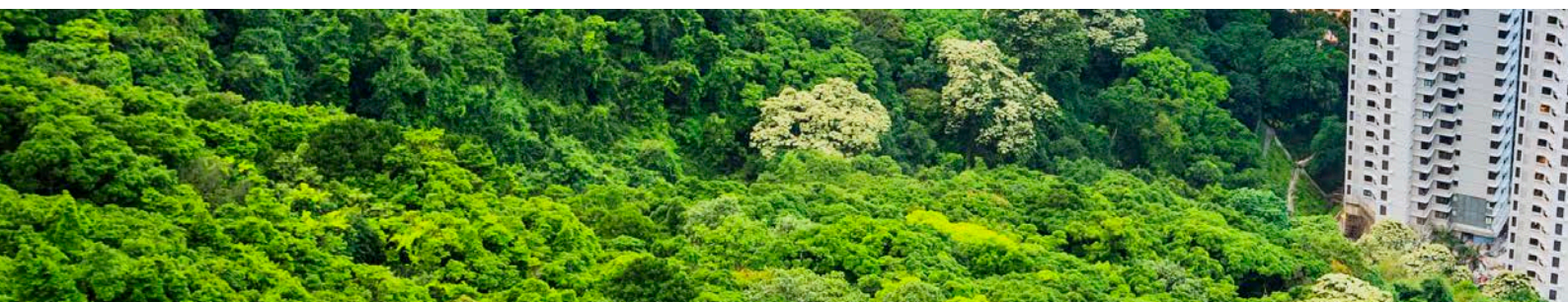
**The economics are complicated but favourable.**

The transition to net zero will require policymakers and businesses to work together to create economically viable transition pathways for parts of the economy. Potentially high-impact examples include improving energy use in buildings and cities, reshaping electricity grids, rethinking the way agriculture affects the land and rapidly decarbonising heavy industries such as steel, cement and chemicals.

**There will be costs associated with transition, but the costs of inaction or of action that is slow and**

**insufficient will be far higher.** Some businesses will be well positioned to make the transition, while others will find that their business model is not compatible with low – or no – carbon operations. A warmer world will devalue some assets. Companies in sectors such as property and infrastructure for instance, where assets are largely outside and exposed to more extreme weather and are likely to see their cost basis rise. Other businesses, meanwhile, will need to pivot and rethink what contribution they can make. Contributions could take the form of ‘softer’, less traditional interventions as demonstrated by Nature Based Solutions, which provide benefits for both carbon reduction and our natural environment, resulting in win-wins. This trend is already occurring in the oil and gas industry, for example, where some businesses are exploring alternative business models and new opportunities. It is equally true that many firms will be able to achieve net zero well before 2050. **In every case, it makes economic sense for companies to act now.**

**Finance is critical – and the financial sector is starting to step up.** There is a rapidly growing focus on climate-resilient investment and lending approaches. This is the result of a confluence of factors. Chief among these are heightened regulatory scrutiny, the roll-out of TCFD recommendations, growing recognition of value at risk, pressure from investors and industry peers, and customer demand. This interest from financiers is leading to increased investee and client engagement to facilitate transition and innovation in new green financing approaches and products. As the finance sector starts to recognise and reward climate performance, so the cost of capital is beginning to reduce for companies that can evidence climate-resilient business strategies. The opposite trend is also unfolding, with cost of capital increasing for companies unable to demonstrate such strategies.





**Financing the transition is further enabled through the growth of green loan products.** There is marked growth of green finance products, the proceeds of which are frequently linked to improving climate performance and decarbonisation. This includes climate and transition bonds, impact investment and 'debt for nature' financing. The EU Green Deal aims to serve as an important catalyst, given its objective of generating over €1 trillion in investment over the next decade. Further scaling of green finance will be required going forward. However, momentum already behind green finance provides a strong incentive to businesses that are seeking to transition to a net zero economy with regard to cost of capital and equity valuation.

**The Covid-19 pandemic has provided an object lesson in how quickly and significantly change can be introduced.** Responses to the virus provide valuable lessons. By showing effective leadership, decision-makers can help build and maintain trust in their actions and minimise risks of public backlash or social fracture, even in the context of dramatic and unforeseen change.

**The net zero transition brings clear opportunities, alongside the major challenges it presents.** Whether we face up to it or not, climate change alongside is one of the major macro trends set to reshape our economy and our society. Facing this fact with a clear commitment and a plan to deliver a net zero future offers the best chance of tackling climate change head-on. More than that, it also presents a unique opportunity to create new industries and markets, as well as to lay the foundations for a healthier and fairer society.

**“The finance sector has a critical role to play in the transition to net zero. With access to capital comes responsibility. And that responsibility is to help the economy transition. If you can transform the financial system, then not only the leaders of the economy will move, but the whole of the corporate world will transition as well.”**

**Nina Seega** Director, Sustainable Finance Research, CISL and academic visitor at the Bank of England



# Developing a Strategic Business Response

For all the progress that has been made, business action on climate change requires a major shift in gear. While the challenges are considerable, the imperative to act is even greater.

**Businesses will have different contributions to make on the journey towards net zero.** Each company’s specific course of action will depend on its respective size, sector, location, governance structure and strategic focus. What is universal for all businesses is a commitment to ensure that neither their activities nor those that occur in their value chain result in negative impacts on the climate from carbon emissions. This demands aggressive action by companies to reduce their direct and indirect emissions.<sup>17</sup> Regardless of their sector, all businesses should encourage policymakers to bring forward clear, consistent and ambitious policies to enable economically viable routes to rapid decarbonisation. In addition – to mitigate the risk of a failure to decarbonise rapidly enough – businesses should support the creation of new markets to incentivise the removal of carbon from the atmosphere and the protection of natural systems required to deliver a new zero future.

**Transitioning to net zero will be a fundamental pillar of business leadership in future.** Many companies around the world now have commitments in place, including a growing number of FTSE 250 and Fortune 500 firms. Some businesses are setting net zero targets that are well ahead of the science. For example, retail giant Amazon has committed to be net zero by 2040, and is encouraging other companies to take a similar step. Since Amazon launched its Climate Pledge last year, ten other corporations have heeded its call, including the US consumer electronics retailer Best Buy, Indian IT consultancy Infosys and German automaker Mercedes-Benz. Some companies, such as software provider Microsoft and windows producer Velux, have even committed to removing all emissions they have ever produced, past as well as present. This kind of momentum reveals that net zero is fast becoming a watermark of business leadership.

## A framework for action

In this report, we have identified four tasks to help businesses develop a strategic response to net zero.



Our framework, which derives from CISL’s *Rewiring the Economy* plan, sets out the core components that we believe are essential for any company looking to be fully aligned with net zero by 2050 at the latest.



## Align organisational purpose, strategy and business models

**“The transition to net zero – and the radical transformation this entails across entire value chains and economies – is a critical test of business leadership. We know that transition is possible, and we have most of the solutions already available to us. What we need now is bold and effective leadership that is committed to delivering the transition; leadership that steps up to shape new markets and transition pathways, that establishes new norms, and – most importantly – that reinvents how we live, work and consume. Such leadership holds out the hope of meeting society’s needs in a commercially viable way, while the driving radical decarbonisation as science dictates.”**

**Lindsay Hooper** Executive Director, CISL

### **A proactive and strategic approach is critical.**

Among the first priorities for companies seeking to develop a strategic response is to get informed and stay informed as the landscape of risk and opportunity rapidly evolves and as new insights, standards and opportunities for impact and best practices emerge. This includes building an understanding of the implications of how climate change and the transition to net zero will impact their company’s long-term financial performance. In this way, they can create a commercially viable transition pathway for the business.

Equally important is the need to clearly articulate a bold ambition and a compelling and positive narrative about the future. This is essential to unlocking innovation and engaging employees, shareholders, customers and business partners. The most effective

net zero responses exhibit two core characteristics: delivery upon a meaningful organisational purpose to society, and full integration into core business strategy.

Designing and implementing a net zero strategy requires effective governance and leadership. Decision-makers need to demonstrate capability, confidence and accountability. Governance systems must also allow for the development and monitoring of effective strategic responses, such as driving innovation and transforming business models, operations and value chains as necessary.





## The role of the Board in delivering net zero

**“The first step at Board level is to make sure that they understand the urgency. The problem is getting their attention. These are clever, responsible people. Often, they just haven’t taken the time to take a step back and take a close look at the science.”**

**Philippe Joubert** Founder and Chief Executive of Earth on Board

**Boards are increasingly recognising that they need to drive the net zero agenda.** This is partly driven by shifts associated with TCFD and investor and regulatory pressure. Our experience also suggests moral and ethical drivers play a part. For instance, some Board members are under pressure from their own children to act on climate change. At a less personal level, many now recognise that climate action reduces cost volatility and the cost of capital, enhances resilience, builds brand value and helps attract talent. For businesses with long-term planning horizons climate change is firmly on the risk register. Given their focus on succession, family-owned businesses are especially attuned to climate risks. The 30 years to 2050, after all, are but one generation away.

Even so, our work with Board members reveals that common misperceptions still persist. Statements we hear often include:

- Science: *“the facts concerning climate change are uncertain or unproven”*
- Risks: *“the speed and impacts of climate change are overstated”*
- Prioritisation: *“businesses have more pressing imperatives”*
- Compliance: *“the obligation is on governments to regulate and companies to follow”*
- Market demand: *“businesses should respond to market demand, not seek to influence customers”*
- Fiduciary duty: *“climate action could negatively impact short-term financial performance”*
- Relative impact: *“individual climate action is futile without mass uptake”*

Addressing these challenges and supporting Boards to develop effective responses to ensure the long-term sustainability of the business is a core focus of the Cambridge Earth on Board Programme.

**There are early signs to indicate that the transition to net zero is being considered more systematically, but more needs to happen.** A growing number of Boards and individual directors are taking action to upskill themselves to address these challenges and misperceptions. Businesses are increasingly considering how to factor climate change and net zero transition into considerations of Board composition and structure. But many Board directors still perceive their role to be one of protecting the business against the challenge of climate change, rather than realising that such protection only really exists in being a positive and proactive part of a necessary transformation for society as a whole. There is still much work to be done.

## Key dimensions

- ✓ **Undertake analysis – and build analytical capability** – to ensure businesses' responses to net zero are informed by a thorough understanding of their climate-related risks and opportunities relating to climate change, as well as of their current and potential contributions to it.
- ✓ **Determine how net zero response delivers on and aligns with the organisation's purpose.** Clarity of purpose is critical in guiding business response over a sustained period. This clarity and alignment will ensure that key strategic, investment and innovation decisions support and do not undermine net zero response.
- ✓ **Establish leadership structures and governance with the necessary capabilities, remit, time and structures** to set appropriate ambitions, drive progress and ensure accountability.
- ✓ **Align the organisational strategy with net zero**, identifying carbon risks and impacts across the value chain (supply chain, operations, customers and end use/disposal of product for material goods), setting evidence-based goals, cascading the strategy to all business units and functions, and ensuring that all financial investments/capital allocation are aligned with transition to net zero.
- ✓ **Commit to net zero innovation, not only within the goods and services you provide, but also in exploring alternative solutions.** For example, rather than focusing on reductions in fugitive emissions from gas production, companies may want to transition away from fossil fuels. Note: given the potential knock-on impacts for workers, companies need to be mindful to ensure that any such transition is socially inclusive and fair.
- ✓ **Develop and maintain agility to adapt** as policies, economics, markets and technologies evolve.





## Set business goals and evidence-based targets, measure and report progress

**“To credibly face up to climate change businesses must use science as a yardstick and must clarify how they plan to report to their stakeholders on their progress in line with the science. Many companies have shown leadership by recognising their sectors can run ahead of the wider economy and have set targets to achieve net zero before 2050. However, setting such a target is only the first step and should represent the start of a wider journey towards action.”**

**Aris Vrettos** Director for Business Transformation, CISL

The call for companies to adopt net zero ambitions marks a direct response to climate science, which lays out the incremental dangers for the planet of rising greenhouse gas levels. To allay a climate crisis (and avoid the huge consequent costs to business), the scientific and political consensus is that carbon emissions must be dramatically reduced to zero by mid-century. Setting a corporate net zero goal represents a critical first step in every company's climate journey.

Ambitions need to combine both a long-term vision for the company's future in a net zero economy and tangible targets that guide immediate decision-making. One route to developing robust and credible set of targets is by working with the Science Based Targets initiative (SBTi), a partnership between CDP, UN Global Compact, the World Resources Institute (WRI) and WWF. Over the past few years, 1,045 companies have committed to science-based climate action, with another 504 companies having a science-based target (SBT). These ambitions are individually approved and published by SBTi.

Science-based targets provide clearly defined pathway for companies to reduce greenhouse gas (GHG) emissions. Targets are considered science based if they are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement – limiting global warming to well below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C

SBTi requires companies to focus initially on emissions on their direct greenhouse gas emissions (Scope 1)<sup>18</sup>, their indirect emissions, including the consumption of purchased electricity (Scope 2) and then on their wider indirect (Scope 3) emissions, particularly where over 40 per cent of a business's total carbon footprint lies in these indirect emissions such as extraction and the production of purchased materials. It classifies targets under one of three categories. Currently, 145 companies are aligned to the 'at least '2 degrees Celsius category' with a similar number are committed to 'well below degrees Celsius category.' In November 2020, the SBTi indicated that 217 companies had committed to the more ambitious target of 1.5°C.

For many organisations these targets serve as a 'north star' to inform decisions, encouraging leaders to prepare the business for the long-term implications of climate change.

For others, though, there are potential challenges associated with the sole focus being on setting and communicating the SBT with no accompanying change programme to align the business with the delivery of the target.

It is necessary for corporate leaders to be clear up front about how they plan to report to their stakeholders on their progress in line with the science. In a similar vein, corporate actions on climate need to be continually informed by open and constructive dialogue with stakeholders in order to foster trust and facilitate collaboration.

## Key dimensions

- ✓ **Set commitments, goals and evidence-based targets** that take into consideration the nature of the business and its position in the economy. These must be aligned to what the science indicates is necessary rather than what is currently possible or convenient. Ensure targets are holistic and fully aligned with net zero. Steps such as reducing a single product's emissions intensity or showcasing a particular supply chain are unlikely to be adequate (see box).
- ✓ **Measure the right things**, recognising the inter-relationship between climate change, people, the environment and the economy (see box on navigating transition in a VUCA world). Then, report progress by using appropriate criteria and metrics so as to understand and communicate the company's full impact. Setting an SBT is only the start: it should support and inform a change programme that quickly evolves over time.
- ✓ **Develop and maintain information systems and deploy analytics** not only to ensure you have access to the data you need to track progress, but also to generate new insights and solutions. For example, data on flood risk held by the insurance division of a financial institution could be used to inform the development of new products to finance climate-resilient infrastructure. Or data on when homeowners take out home improvement loans could be used to inform the timing of communications campaigns on the benefits of investing in home energy efficiency.
- ✓ **Report publicly on goals** and targets and progress towards them, disclosing reliable, balanced information on climate action.
- ✓ **Verification:** Have operational greenhouse gas emissions independently audited/verified by a third party, or in accordance with an international assurance standard.

(From CISL's Net zero framework for business – see Technical report)

## Understanding progress

**“Setting a net zero target is easy, but reaching it will require a shift in both metrics and mindsets. We didn't get to the moon by thinking “let's get to the top of Everest and worry about the next step when we get there”. We started with the end in mind. That's what all good designers do, and all business leaders must become designers now.**

**Incremental thinking won't get us there. Efficiency drives won't get us there. We have to completely reimagine how we create value - fundamentally redesigning our products, our processes, our procurement practices, and ultimately our business models.”**

**Geoff Kendall** Co-Founder and CEO, Future-Fit Business

Climate change depends on the **stock** of greenhouse gases in the atmosphere, not the **rate** of emissions. The IPCC's SR1.5 report<sup>5</sup> identifies the total budget for greenhouse gas emissions as being 420 Gt CO<sub>2</sub> for a 66 per cent chance of staying under 1.5°C. This equates to around ten years at pre-Covid-19 rates of emissions.

**For businesses, this is material.** The 'carbon budget' highlights the fact that the total carbon budget is absolute and that the timelines are short. In practice, this means that an annual improvement in the efficiency of a single product is likely to be inadequate. Effective strategies require organisations to align **all** their activities to the required rate of change as indicated by the science. This not only includes activities across their operations but also in their supply chains, in the use and disposal phases of their products.



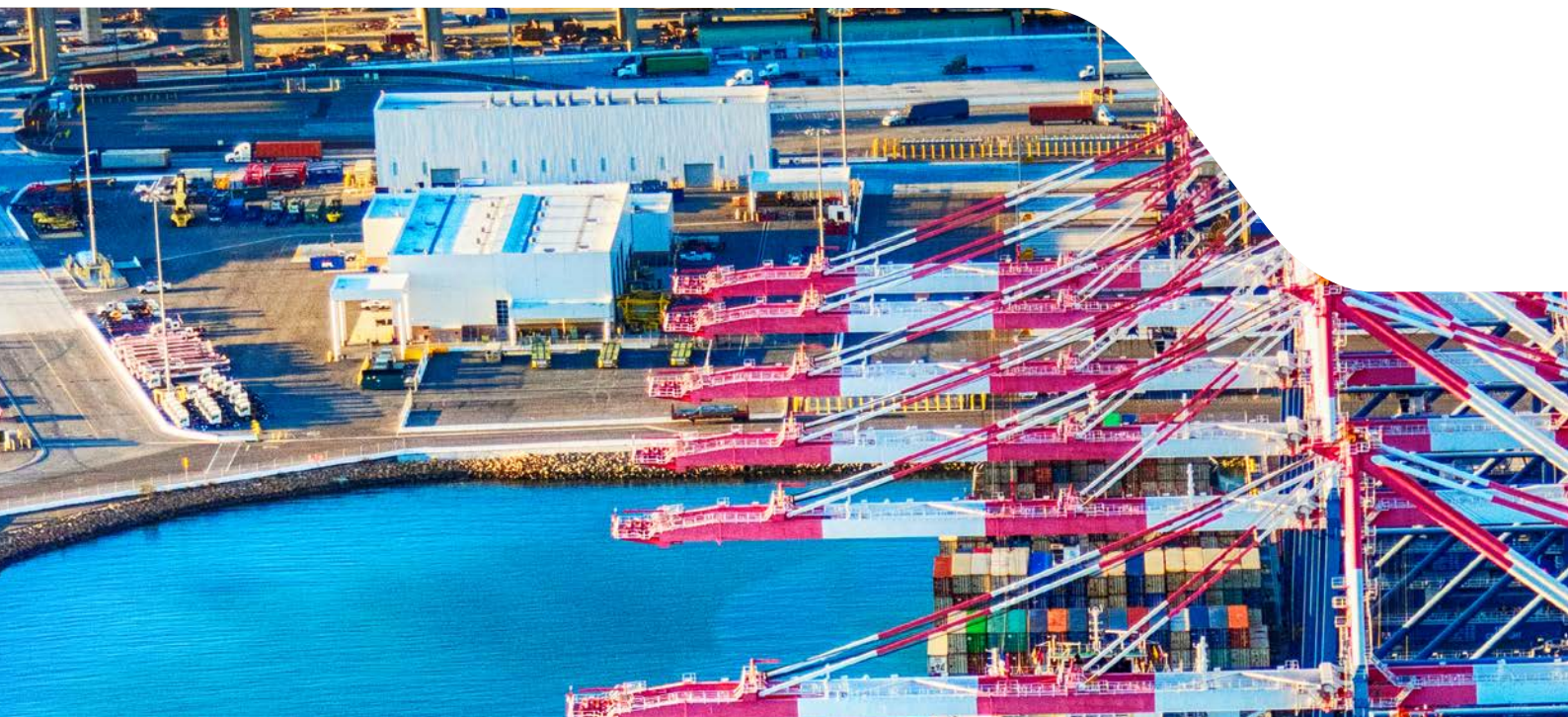


**“From the start, every business needs to have a clear, long-term ambition that is consistent with net zero and aligned with the latest science. If those ambitions are going to translate into action, then they’ll also need clear interim and long-term targets.**

**A net-zero strategy also obliges companies to look beyond their own emissions and consider the emissions in their wider value chains. More and more companies are doing the first of these actions, but far fewer are active on the second. That is because tackling emissions in your value chain requires a genuinely transformational plan for how you source and sell your products.**

**Finally, if companies set targets and milestones, they need to show they are delivering. As a minimum, that means reporting progress regularly and transparently. In addition, it involves listening closely to your stakeholders. Personally, I’d also like to see more companies countering the ‘go slow’ message from certain business associations. Net zero companies need to be totally intolerant of the laggards and naysayers.”**

**Steve Howard** former Chief Sustainability Officer, IKEA







# Embed net zero practices in operations and value chains

**“Articulating a goal and achieving it are fundamentally different things. For most businesses, achieving net zero will change all aspects of their operations – from talent development and management accounts to new partnerships and radical innovation. Net zero is the largest change management process on the planet.”**

**Paul Begley** Director, Strategy Programmes, CISL

An effective response to net zero requires thoughtful and systematic planning to inform decision-making, actions and behaviours right across the business, from Board directors to the shop floor.

This includes **an action plan to decarbonise the business’s own operations**, for example by improving the efficiency of buildings, fleet and industrial processes; switching to electricity from renewable sources; switching to vehicles powered by non-fossil-fuel sources, such as batteries, hydrogen and/or biofuels; and creating dedicated climate funds for strategic, longer-term, high-impact potential projects.

It also includes **action to decarbonise supply chains** through factoring climate change into all procurement decisions, including for professional and financial services and working with suppliers to enable decarbonisation, focusing on the emissions hotspots.

## **Accounting and financing must also be aligned.**

Businesses should monitor, take accountability for and reduce their carbon exposure and impact of their investments (including their pensions) by shifting investments to zero/low carbon opportunities.

In support of this, businesses will benefit from **harnessing new, emerging opportunities for cheaper and more patient forms of financing** to support the transition. A growing number of investors, bankers and insurers are collaborating with corporate clients and bringing forward new financial products – including products that offer discounted financing – to support transition and take low carbon solutions to scale.

Any remaining hard-to-mitigate emissions may need to be addressed via carbon removal or offsetting. However, this should be a last resort, since the technologies and systems needed for this are not yet well proven.

As well as delivering against a net zero ambition, the organisation should also plan for enhanced resilience and adaptation to a temperature increase of (at least) 1.5°C.





**“Back in 1996, we set ourselves the goal of becoming net zero by 2020. Around 70 per cent of our carbon footprint occurred in our supply chain, so to achieve success we had to encourage our suppliers to join us in reducing their emissions. Awareness of climate change was much lower back then and many suppliers really struggled to get their heads around what we were asking.**

**What really helped was that our founder and chairman at the time, Ray Anderson, personally visited the senior management of our main suppliers and explained his rationale for our net zero goals. He made it clear that this was a joint endeavour and that we’d be there to help with resources and share know-how, and so on.**

**Most of our suppliers could see the value of saving energy and reducing their reliance on fossil fuels. One of our yarn providers has even invested in a state-of-the-art facility to manufacture an eco-friendly alternative to nylon. Yet, some of our suppliers simply weren’t ready to make the journey with us. As a result, we had to reduce our orders and, in a handful of cases, discontinue buying from them. At the time, it was a really tough call. Cancelling contracts is definitely a last resort, but we couldn’t have hit our net zero target if we hadn’t.”**

**Nigel Stansfield** Interface, President for Europe, Africa, Asia, Australia

Every company has functions within a different operating context and has a different supply chain. It therefore requires a different plan and approach to climate action. That said, certain key considerations that apply to all are outlined on the following page.

### Key processes:

- ✓ **Integrate all systems, processes and policies for decision-making, accounting and planning.** In particular this includes incorporation into corporate risk function, developing and putting into place necessary policies, codes of conduct, management standards and associated procedures, and the incorporation of strategy and goals into business planning processes and business management systems, e.g. project management systems and accounting or financial management systems.
- ✓ **Empower key functions, assign responsibilities and align incentives.** Distribute ownership for net zero progress across the organisation, and mobilise and empower different functions to deliver, so that it sits with the appropriate lines of business instead of a single, central sustainability team that may have minimal influence on business operations. Assign roles and responsibilities for delivering against the strategy, clarifying expectations and responsibilities of employees, and translating goals and targets into performance expectations of individual employees. Where appropriate, link employee compensation to the achievement of net zero goals.
- ✓ **Develop capability and capacity.** Net zero strategies place new demands on leaders and require effective leadership capacity right across organisations. This may well require the development of different technical competences. Examples include the capacity to exert influence across complex systems, to collaborate with others in the co-creation of solutions, and to innovate in products, processes and business models. Creating such capacities may require investment in staff development, deployment of skilled and experienced employees into key roles, and the creation of new job functions or roles.
- ✓ **Communicate and engage internally.** Keep employees continually informed as the strategies, targets, policies, procedures, and products and services evolve. Ensure viable leadership by the executive team so as to signal the strategic significance of net zero to the business's future success. Proactively seek and leverage employee input and cultivate influential individuals as champions to support innovation, action and sharing across the business.
- ✓ **Foster innovation across the business.** Integrate the net zero ambition into existing innovation processes, including in the areas of tech and digital transformation. Where necessary, create new innovation forums and systems in order to test and scale zero carbon alternatives to current carbon-intensive ways of working. To maintain leading-edge insights into emerging technologies and solutions, pay attention to peers and disruptive innovators in other sectors. In addition work closely with leading research institutes.
- ✓ **Address legacy issues.** Companies often find themselves with legacy products and services that are incompatible with a net zero future. Technological or economic barriers may prevent rapid decarbonisation. In such circumstances, companies are faced with the prospect of investing significantly in research and development (at additional cost) or adopting a phase-out strategy (resulting in lost revenues), or a combination of these approaches. While there are real short-term costs and impacts, the prospect of significant market disruption as a result of transition to a net zero economy means that inaction will not be an option and grappling with these impacts is essential.



# Engage, collaborate and advocate for change across regions, sectors and markets

**“The complex and interconnected nature of the climate change challenge means no single perspective is sufficient. Business, the finance sector and governments all have a role to play as policy, technology and investment trends all need to be geared towards delivering an unprecedented economic transformation for a net zero future.”**

**Eliot Whittington** Director of Policy, CISL

**The responsibility of business to be part of the net zero transition and its opportunity to lead change does not end at the limits of financial control but should encompass work to deliver wider system change.** When business partners share a common commitment to climate action, opportunities to synchronise and scale their net zero efforts increase exponentially. Through working with others, companies can drive change through their internal stakeholders, peer network and customer base.

## **A critical partner for business is government.**

Policy is invariably an essential enabler for business action. Indeed without it, most net zero plans will fail. Many policymakers are actively working to develop their own plans for a net zero transition. Unfortunately business's interactions with governments all too often slow down and even undermine the necessary actions. A clear opportunity exists for business and policymakers as partners to be joint partners in delivering a net zero economy. Numerous partnerships and platforms such as the Corporate Leaders Groups now exist to deliver this co-operative vision.

Ultimately, net zero responses must include a strategic focus on the wider impacts that businesses can have, from shaping markets and policies, through to engaging customers, investors, and influencing positive change in politics and civil societies. All of these areas should be seen as vital tools in delivering a net zero future.

## **Key dimensions**

- ✓ Use credibility and influence to **lobby for progressive government ambition** – and support the **process of developing and implementing climate change policy** and regulation.
- ✓ Demonstrate support for mitigating climate change through **membership of industry associations** that are supportive and using this as a platform for wider influence.
- ✓ **Shape market demand: work to engage, inspire and educate clients** to help them integrate climate impacts into their purchasing decisions. **Connect customers/clients with experts, tools and/or capital** that improves the visibility and attractiveness of low carbon business cases, and forge **strategic partnerships and deep collaborations** with key clients to enable the co-creation of solutions.
- ✓ **Engage with investors, shareholders, lenders and insurance providers** to influence their focus on long-term transition to a sustainable economy, not short-term financial performance. Establish a **robust communications strategy** to develop clear narratives that show economic decarbonisation is in business interests, engage with stakeholders, and communicate the net zero commitments, action plans and performance in a confident and transparent manner.



# The Big Debates

**Any company looking to set its net zero strategy will encounter areas of uncertainty and debate. Here are some of the recurring themes we have identified through our work with businesses on this agenda:**

## **Taking responsibility for system change**

Any serious attempt to deliver a net zero strategy will almost certainly bring companies up against issues beyond the bounds of their direct control. It could be shifting stubborn emissions hot spots in the supply chain, for instance, requiring support to innovate at speed and scale. On a more macro level, most pathways to a net zero economy require a shift in how whole systems are configured. Such situations require businesses to work with governments and others. A case in point is the forging of new markets for climate solutions that are technically feasible but impossible to execute within the existing market framework.

Often businesses have looked at this challenge and assumed that this broad systemic nature means that climate change is a problem that lies firmly within the remit of governments. However, climate also crosses many system boundaries for governments, and historically they have not yet delivered the scale and speed of action required. Where successes have occurred, they have tended to arise from a combination of government support and regulation, on the one hand, and business delivery and deployment, on the other. In these cases each of the two actors has generated trust and confidence in the other, thus encouraging a virtuous cycle known as an ‘ambition loop’.<sup>19</sup>

## **Finding the net in ‘net zero’**

A net zero economy requires not only deep decarbonisation, but also some amount of carbon removal. The IPCC examines several global pathways to net zero, all with varying levels of reliance on ‘negative emissions’ options.

For any business struggling to identify effective routes to cutting carbon, the existence of emissions removal options is an attractive thought. However, even in the most ambitious projections for significant negative emissions, businesses’ main strategy should remain focused on deep emissions cuts. In addition, numerous uncertainties still hang over the effectiveness of emissions removals. As such, it is CISL’s view that decarbonisation must be pursued wherever possible.

Further debate centres on the different types of emissions removals currently available.

One option invites business to invest in environmental projects designed to protect and restore carbon sinks. These sinks, which include trees, plants, soil and ocean life, form a natural part of the earth’s carbon cycle. When done well such actions also work to restore biodiversity and support resilience to climate impacts. Conversely, if done badly such activities can damage biodiversity, undermine human rights and lead to very short-lived carbon storage. Even when such projects are executed well, however, the potential scale and longevity of such carbon removals remains far from certain.

On the other hand, there are a suite of technologies available that promise to deliver negative emissions – capturing the carbon from the air and finding a route to store it. While several of these technologies exist, they are not without problems. They are often prohibitively expensive and at present lack a clear business model, while taking these technologies to scale may well cause unintended consequences. The challenge for business, financial institutions and government is to find ways to scale these safely, while also supporting new jobs and transitioning to a sustainable economy.



## Delivering the possible, not the perfect

One of the strategies most enthusiastically advocated by economists and business leaders in support of climate action is carbon pricing. Theoretically a global carbon price would be the best route to addressing the problem – prompting a range of innovative market responses, with no risk of competitiveness impacts. However, a number of reasons exist not to see carbon pricing as a silver bullet. Firstly, climate action is increasingly understood as an innovation challenge – requiring a more focused set of policies to bring new approaches to market at speed. Secondly, the scale of change required to deliver a net zero economy means that climate change is rarely addressed in isolation. Often, a carefully tailored set of policies is needed to balance wider economic, social and environmental goals with the net zero goal. Finally, the politics of a global carbon price is unfavourable – requiring, as it would, widespread international agreement to a single aligned and not universally popular policy. The difficulties are highlighted by the negotiations over a detailed rulebook for implementing the Paris Agreement. Five years on, persuading signatories to join up national carbon pricing regimes remains the main sticking point.

This is not to say that a carbon price is not a valuable and important goal. A carbon price remains a key tool in delivering climate action, rightly supported by many leading experts and businesses. Well implemented, it also stands to play a crucial role in supporting and accelerating carbon reductions going forward. However, as most leading advocates now accept,<sup>20</sup> it is viewed as a complementary tool to be deployed alongside other policies.



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